

REMARKS

Specification

Applicant has amended page 8 at line 1 to correct the spelling as suggested by the examiner. Acceptance of this correction is respectfully requested.

Claim Rejections - 35 U.S.C. §102; 35 U.S.C. §103

Claims 1-3, 5-9, 12 and 13 were rejected as anticipated in view of Mandel U.S. Patent No. 4,544,428. Claims 4 and 11 were rejected as obvious in view of Mandel taken with the reference to Toth.

Claims 5, 7, 12, and 14 were rejected as obvious in view of Enders taken with Roy. The examiner kindly provided applicant with a translation of Enders.

Claims 15-18 were rejected as obvious in view of Fawley U.S. Patent No. 5,289,942 taken with Wills Patent No. 4,690,295.

The amendments to the claims effectively combine the subject matter of claims 1 and 2 as amended claim 1. Claims 8 and 9 were combined to provide amended claim 8. Claims 15 and 16 were amended to result in newly submitted independent claim 15. Claims 17 and 18 were similarly combined to result in newly presented independent claim 17.

The invention is a reinforced metal tank wherein the tank is generally cylindrical and has a longitudinal axis. Bands of carbon fibre fabric are wrapped around the tank for at least a portion of the axial height of the tank. The bands extend entirely around the tank and are bonded by an adhesive and thus adhered to the outside wall of the tank. The bands are applied passively as described in paragraph 27 of the specification. They are not tightened. In other words they are placed about the empty tank and no pressure is placed upon the container during placement of the

bands. Additionally, the bands are formed and comprised of carbon fibres. The carbon fibres as well as the bands are oriented in a specific fashion as set forth in the amended claims. That is, the bands are predominantly aligned in a direction substantially perpendicular to the axis of the container. Additionally, the bands of fabric, which are comprised of carbon fibres, are bonded to the container in such a way that the carbon fibres lie predominantly along a direction substantially perpendicular to the axis of the metal container. Consequently, both the bands of carbon fibre fabric as well as the carbon fibres comprising the bands lie predominantly along a direction substantially perpendicular to the axis of the metal container.

Applicants respectfully traverses the rejections set forth by the examiner inasmuch as none of the references teach the combination of claimed features set forth in the independent claims and in particular the claimed features associated with the orientation of the carbon fibre fabric and the carbon fibres comprising the fabric. By way of example, the principal reference to Mandel does not discuss or have any teaching regarding the orientation of a wrapped fabric or the fibres in the fabric. For example, in viewing the drawing of Mandel, the wrapping appears to be helical and not predominantly normal to the axis of the container. Further, there is no teaching with respect to the fibres comprising the fabric.

The reference to Fawley teaches at column 6, lines 9-15 helical winding of filaments. There is no teaching of the orientation of the fabric or the fibres as claimed in the presently submitted application. Wills in Patent No. 4,690,295 teaches at column 3, line 7 that the windings may be axial or circumferential or both. The patent further teaches that filaments are wound rather than fabric bands comprised of fibres. To the extent that the fabric bands are comprised of fibres there is no teaching of the orientation of the fibres. The teaching of the patent is the combination of axial and

circumferential hoop layers, and that it is important to have a combination of those two types of windings or layers.

Toth in patent 4,614,279 teaches a random arrangement of filaments. Layers are provided wherein chopped fibres are arranged randomly. Filaments are arranged parallel to and at right angles to the longitudinal axis of the liner or container (see column 4, lines 9-30).

In no event, is there the teaching of the arrangement of bands in combination with carbon fibres wherein the carbon fibres as well as the bands are each arranged as claimed in a predominantly perpendicular manner to the axis of the container. This is discussed at paragraphs 24 and 25 of the present application.

By positioning the fibres of the carbon fibre fabric in the manner claimed, it is possible to provide high resistance to buckling from deformation of the sheet metal during a seismic event. The prior art does not disclose or urge such a combination or the result claimed.

In view of the foregoing therefore, applicant believes that the amended claims are in condition for reconsideration and passage to allowance. Reconsideration thereof and passage to allowance is earnestly solicited.

Respectfully submitted,

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